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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,196	11/26/2003	Scott Mordin Hoyte	135137	9037

7590 07/30/2004

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EXAMINER

LEDYNH, BOT L

ART UNIT PAPER NUMBER

2862

DATE MAILED: 07/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/723,196

Applicant(s)

HOYTE ET AL.

Examiner

Bot LeDynch

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/26/03.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.


Bot LeDynch
Primary Examiner

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 12-22 recites the limitation "said signal conditioner circuit" in lines 1-2 of claim 13. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Slates (US 6346807). Slates discloses the same invention as claimed: A method of determining a gap between an eddy current proximity transducer 12 and a target (T), said method comprising: providing a data structure that is populated with data that is relative to a gap value corresponding to a complex impedance value of the transducer (col. 20 lines 61-65, Figs.1-4, etc.); exciting the transducer at a plurality of different frequencies (col. 17 lines1-10, etc.); determining a complex impedance value of the

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transducer at respective one of the plurality of frequencies (col. 20 lines 61-65, Figs.1-4, etc.); and determining the gap using the data structure and the complex impedance value (col. 20 lines 3-12, etc.); look-up table 123; averaging gap values (col. 19, first paragraph, etc.); simultaneously different frequencies (col. 17, first paragraph; Fig.2 at 70 and 72; etc.); three different frequencies (col. 17 first paragraph; direct digital syntheses 72).

A system for determining a gap between an eddy current proximity transducer 12 and a target (T), said system comprising: a network comprising said transducer 12 serially coupled to an electrical component 40; a signal generator circuit 70 operatively coupled to said network, said signal generator circuit configured to drive a current that includes a plurality of frequency components through said network wherein a first analog voltage V1 is impressed across said network and a second analog voltage V2 is impressed across said transducer; a sampling and digitizing circuit 90 coupled to said signal generator circuit, said sampling and digitizing circuit configured to convert the first analog multi-frequency voltage impressed across said network and said second analog multi-frequency voltage impressed across said transducer into a plurality of digitized voltages; a convolution circuit 100 comprising an input terminal corresponding to at least one of the plurality of component frequencies, said convolution circuit configured to convolve each digitized voltage with a digital waveform for forming a first complex number and a second complex number correlative to the first analog voltage and the second analog voltage respectively for at least one of the component frequencies; and a

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memory comprising a data structure corresponding to at least one of the component frequencies, said data structure populated with data that is relative to gap values based on at least one of the first complex number and the second complex number (see Figs. 1-8; col. 17, first paragraph; col. 20 lines 61-65; etc.); three direct digital syntheses 72.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bot LeDinh whose telephone number is 5712722231. The examiner can normally be reached on Maxiflex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on 5712722235. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



BL/ 2004

Bot LeDinh, JD, PhD, DA
Primary Examiner